

MICROSUSPENSION ASSEMBLIES FOR DIRECT ACCESS STORAGE DEVICES

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6/9/09 5 This is a divisional of U.S. Application Serial No. 10/047,229, filed January 14, 2002, which is hereby incorporated by reference in its entirety.

now US PAT. 6,725,526,

Field of the Invention

10 Embodiments of the present invention relate generally to disk drive systems and to microsuspension structures which support read/write recording heads within the systems.

Description of Related Art

15 Direct access storage devices typically include a rotatable magnetic disk having concentric data tracks defined for storing data, and a magnetic recording head or transducer for reading data from and writing data to the various data tracks. In typical disk drive systems, a stack of one or more magnetic disks is mounted over a spindle on a drive motor. The system also includes a head actuator including a head suspension assembly for supporting and moving the magnetic recording head relative to the disk surfaces, and electronic circuitry for processing signals to implement various functions of the disk drive.

20 The head suspension assembly typically provides an arm-like structure. The suspension assembly supports the head close to the surface of the disk as the disk rotates. The magnetic head is carried on a slider having an air bearing surface which is positioned during operation adjacent to the data surface of the disk and usually separated from the surface of the disk by a cushion of air generated by the rotating disk. The terms "head" and "slider" are sometimes

25 both used to refer to the slider having a head attached thereon. The slider design affects the efficiency, density, speed and accuracy with which the data can be read and written to the disk.

The suspension assembly connects the slider to a rotary or linear actuator which operates to move the suspension assembly to position the magnetic head directly adjacent to